Food Safety

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KSC/CCAFS Health Education and Wellness Program

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Introduction

September is National Food Safety Education Month. Created by the National Restaurant Association Educational Foundation's International Food Safety Council, the purpose of this month is to increase awareness of the importance of food safety education throughout the restaurant and foodservice industry. Although National Food Safety Education Month was intended for restaurants and the food service industry, it is important to increase awareness among consumers when handling food.

4 C's

The 4 C's is a useful way to remember food safety. The 4 C's for food safety are not cut, color, clarity, and carat of a diamond. Instead, they are clean, cook, combat cross-contamination, and chill.

Clean

Hand washing, rinsing fruits and vegetables, and surface cleaning are important components in food safety. Cleaning can prevent contamination and the spread of bacteria and viruses.

Hand Washing

When should you wash your hands?

You should wash your hands often. Probably more often than you do now because you can't see germs with the naked eye or smell them, so you do not really know where they are hiding.

It is especially important to wash your hands…

- Before, during, and after you prepare food
- Before you eat, and after you use the bathroom
- After handling animals or animal waste
- When your hands are dirty
- More frequently when someone in your home is sick.

What is the correct way to wash your hands?

- First wet your hands and apply liquid or clean bar soap. Place the bar soap on a rack and allow it to drain.
- Next rub your hands vigorously together and scrub all surfaces.

- Continue for 10 - 15 seconds or about the length of a little tune. It is the soap combined with the scrubbing action that helps dislodge and remove germs.
- Rinse well and dry your hands.

It is estimated that one out of three people do not wash their hands after using the restroom. So these hand washing tips are especially important when you are shaking hands with others and eating at shared food venues (e.g. buffets).

Fruits and Vegetables

Rinsing fruits and vegetables prior to use is an important behavior in food safety. Rinse raw produce under running water. Don't use soap, detergents, or bleach solutions for rinsing. For thick or rough-skinned vegetables and fruits, use a small vegetable brush to remove surface dirt. Try to cut away any damaged or bruised areas on produce. Bacteria can thrive in these places.

Surface Cleaning

- Consider using paper towels to clean up kitchen surfaces and throw the germs away with the towels. If you use cloth towels, launder them often, using hot water. **Note:** Don't dry your hands with a towel that was previously used to clean up raw meat, poultry, or seafood juices.
- Wash your cutting boards, dishes, utensils, and countertops with hot, soapy water after preparing each food item and before you go on to the next food. Periodically, kitchen sanitizers can be used for added protection against bacteria. You can also use one teaspoon of liquid chlorine bleach per quart of clean water to sanitize surfaces. The bleach solution needs to sit on the surface for about 10 minutes to be effectively sanitized.
- Replace excessively worn cutting boards (including plastic, non-porous acrylic, and wooden boards). Bacteria can grow in the hard-to-clean grooves and cracks.
- In your refrigerator, wipe up spills immediately, clean refrigerator surfaces with hot, soapy water, and, once a week, throw out perishable foods that should no longer be eaten.
- Keep pets off kitchen counters and away from food.

Cook

Cooking food safely is a matter of degrees! Food safety experts agree that foods are properly cooked when they're heated for a long enough time and at a high enough temperature to kill harmful bacteria that cause foodborne illness. Note that this temperature can vary from food to food.

Cook It Right

Color is not a sure indicator of whether food is safe to eat. The only way to know that meat, poultry, casseroles, and other foods are properly cooked all the way through is to use a clean food thermometer.

Cooking Guidelines
Eggs
• Cook eggs until they are firm and not runny • Do not eat raw or partially cooked eggs • Avoid eating other foods that include raw or partially cooked eggs
Poultry
• Cook poultry until it has an internal temperature of 180° F • It is done when the juices run clear and it is white in the middle • Never eat rare poultry
Fish
• Cook fish until it is opaque or white and flaky
Meat
• Cook ground meat to 160° F • It is done when it is brown inside. This is especially critical with hamburger meat.

Leftovers
Leftovers should be reheated to 165° F (74° C). Bring sauces, soups, and gravies to a boil.

Microwave Musts
We all enjoy the benefits of using the microwave for cooking and reheating foods in minutes, even seconds. However, microwaves often cook food unevenly, thus creating hot and cold spots in the food.

Bacteria can survive in the cold spots. This uneven cooking occurs because the microwaves bounce around the oven irregularly. Microwaves also heat food elements like fats, sugars, and liquids more quickly than carbohydrates and proteins. Extra care must be taken to even out the cooking so that harmful bacteria is destroyed.

When cooking or reheating foods in the microwave, keep these tips in mind:

1. Cover food with plastic wrap or a glass covering and add a little liquid to food. This creates steam, which readily kills pathogens.
2. To ensure uniform heating, turn the dish several times during cooking. Stir soups and stews periodically during reheating to ensure even heating.

3. When done cooking, make sure the food is hot and steaming. Use a food thermometer and test the food in 2 or 3 different areas to verify that it has reached a safe internal temperature.
4. When defrosting food in the microwave, cook the food immediately. When you thaw food in the microwave, some areas of the food may become warm and begin to cook during the defrosting process. The internal temperature of the food probably hasn't reached the temperature needed to destroy bacteria and, indeed, may have reached optimal temperatures for bacteria to grow. So don't let the food sit in the danger zone!

Combat Cross-Contamination (separate)

Here's how to prevent harmful bacteria from S-P-R-E-A-D-I-N-G!

Safely Separate

Separate raw meat, poultry, and seafood from other foods in your grocery store shopping cart and in your refrigerator.

Take Two

If possible, use one cutting board for raw meat products and another one for fresh fruits and vegetables.

Lather Up

Always wash hands, cutting boards, dishes, and utensils with hot, soapy water after they come in contact with raw meat, poultry, seafood, eggs, and unwashed fresh produce.

Clean Your Plate

Place cooked food on a clean plate. If you put cooked food on an unwashed plate that previously held raw meat, poultry, or seafood, bacteria from the raw food could contaminate the cooked food.

Seal It

To prevent juices from raw meat, poultry, or seafood from dripping onto other foods in your refrigerator, place these raw foods in sealed containers or plastic bags.

Marinating Mandate

Don't use sauce that was used to marinate raw meat, poultry, or seafood on cooked foods, unless it is boiled before applying. Never taste marinade or sauce that was used to marinate raw meat, poultry, or seafood.

Chill

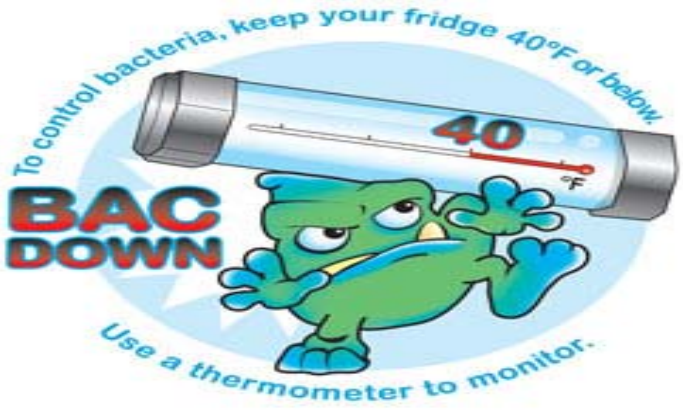
Keep perishables in the refrigerator! At room temperature, pathogenic bacteria in food can double in number every 30 to 40 minutes. The more bacteria there are, the greater the chance you could become sick.

Follow these COOL rules:

- Refrigerate food quickly because cold temperatures keep most harmful bacteria from multiplying. Many people think it will harm their refrigerator to put hot food inside, but it's not true. Hot food won't harm your refrigerator. More important, prompt refrigeration of foods will keep your food and you safer.
- Set your home refrigerator no higher than 40° F (4° C) and the freezer unit at 0° F (-18° C). Check the temperature occasionally with an appliance thermometer.
- Refrigerate or freeze perishables, prepared food, and leftovers within 2 hours of opening or serving.
- Divide large amounts of leftovers into shallow containers for quick cooling in the refrigerator.
- Allow foods to marinate in the refrigerator – not on the kitchen counter or next to the grill.
- Don't pack the refrigerator too full. Cold air must circulate to keep food safe.
- At family outings or barbecues, use a cooler to keep perishable foods cold. Always use ice or cold packs and fill your cooler with food. A full cooler will maintain its cold temperatures longer than one that is partially filled.

For safe thawing, follow the THAW LAW:

- Never thaw foods at room temperature. You can safely thaw food in the refrigerator. Four to five pounds of frozen food takes about 24 hours to thaw.
- You can also thaw food outside the refrigerator by immersing it in cold water. Change the water every half hour to keep the water cold.
- You can thaw food in the microwave, but if you do, be sure to cook the food immediately after it's thawed.



Food and Water Safety for Disasters

Water

After a hurricane or major storm you should assume that all water sources are contaminated until proven safe (as stated by local authorities). Purify all water used for drinking, cooking and cleaning both eating and cooking utensils. Also purify the water used for washing hands and body and kitchen and bathroom surfaces.

Do not use water that has a dark color, an odor, or contains floating material.

To disinfect water, use **ONE** of the following methods:

1. Boil at a rolling boil for 10 minutes.
2. Add eight drops of liquid chlorine bleach (such as Clorox) per gallon of water. Make sure the bleach has no active ingredient other than 4-6% sodium hypochlorite.
3. Add 20 drops of 2 percent iodine per gallon of clear water or 40 drops per gallon of cloudy water.
4. Add water purification tablets according to directions on the package. These tablets can be bought at most drug and sporting goods stores.

Thoroughly mix these solutions and let the water stand for at least 30 minutes before using. To lessen the flat taste of boiled water, pour the water back and forth several times between two clean containers.

Always use clean or purified water to wash any parts of the body that have come in contact with surfaces contaminated by flood waters.

Water in water pipes and toilet flush tanks (not bowls) is safe to drink if the valve on the main water line was closed before the flood.

Food

After a storm has blown out electricity or gas lines, cooking or preparing meals can be difficult and hazardous if a few basic rules are not followed.

Tips

- Charcoal or gas grills are the most obvious alternative sources of heat for cooking. **NEVER USE THEM INDOORS**. In doing so you risk both asphyxiation from carbon monoxide and the chance of starting a fire that could destroy your home.
- Likewise, camp stoves that use gasoline or solid fuel should always be used outdoors.
- Small electrical appliances can be used to prepare meals if you have access to an electrical generator.
- Wood can be used for cooking in many situations. You can cook in a fireplace if the chimney is sound. Don't start a fire in a fireplace that has a broken chimney. Be sure the damper is open.
- If you're cooking on a wood stove, make sure the stove pipe has not been damaged.
- If you have to build a fire outside, build it away from buildings, never in a carport. Sparks can easily get into the ceiling and start a house fire.
- Never use gasoline to get a wood or charcoal fire started.
- Make sure any fire is well-contained. A metal drum or stones around the fire bed are good precautions. A charcoal grill is a good place in which to build a wood fire. Be sure to put out any fire when you are through with it.
- When cooking is not possible, many canned foods can be eaten cold.

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http://www.nal.usda.gov/foodborne/index.html